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(71) Applicant (for all designated States except US): **CANON
KABUSHIKI KAISHA** [JP/JP]; 3-30-2, Shimomaruko,
Ohta-ku, Tokyo, 1468501 (JP).

(72) Inventors; and

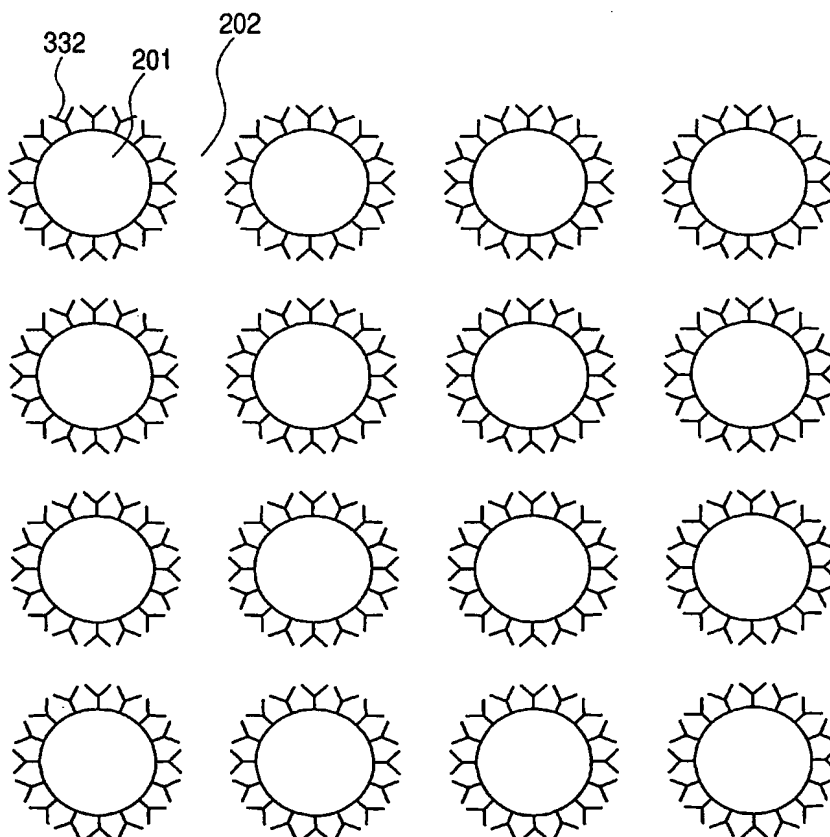
(75) Inventors/Applicants (for US only): **YANO, Koji**

[JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP). **OKAMOTO, Kohei** [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP). **YAMAZAKI, Takeo** [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP). **SHIOTSUKA, Hidenori** [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP). **SUGITA, Mitsuro** [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP). **IMAMURA, Takeshi** [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP). **OUCHI, Toshihiko** [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP). **KURODA, Ryo** [JP/JP]; c/o Canon Kabushiki Kaisha, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 146-8501 (JP).

(74) Agents: **OKABE, Masao** et al.; No. 602, Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo 100-0005 (JP).

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(54) Title: **SENSOR FOR DETECTING A TARGET SUBSTANCE IN A FLUID**



(57) Abstract: A device for detecting a target substance in a fluid is provided. This device comprises a periodic structure having a vacant portion for passing the fluid containing the target substance and a solid portion arranged regularly and capable of transmitting an electromagnetic wave, an electromagnetic wave-projecting means for projecting the electromagnetic wave to the periodic structure, and a detecting means for measuring the magnetic wave emitted from the periodic structure to detect a change in periodic distribution of a refractive index. This sensor is highly sensitive in a small size.

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